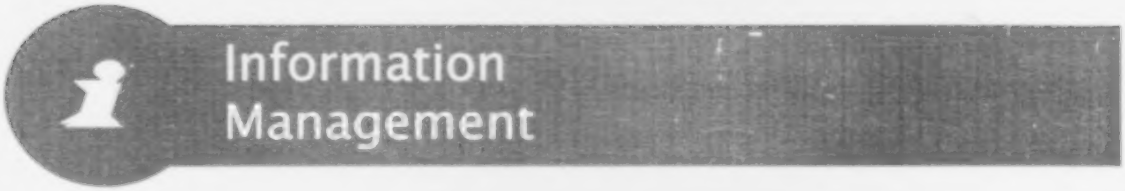

Digital Preservation Resources Guide

February 2005

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GOVERNMENT OF ALBERTA

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Information Management Branch
Government and Program Support Services Division
Alberta Government Services
3rd Floor, Commerce Place
10155 – 102 Street
Edmonton, Alberta, Canada
T5J 4L4

Office Phone: (780) 422-2657
Fax: (780) 427-1120

Web sites:
http://www.im.gov.ab.ca
http://www.gov.ab.ca/foip
http://www.pipa.gov.ab.ca

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1.
Introduction

This resources guide was prepared to assist the Government of Alberta in developing a strategic corporate approach to the preservation of digital information. It was compiled by John McDonald, Information Management Consulting and Education (Ottawa, Ontario) with the support of Jocelyne-Jan Turner who prepared the descriptions of the web sites.

The significant sites dealing with digital preservation are marked with an "*". The list does not represent the "best of breed". Rather it attempts to provide a cross section of the kinds of sources one can expect to find that touch on various aspects of digital preservation.

For an excellent and comprehensive, up-to-date overview of key initiatives and sources on digital preservation please consult: "DPC/PADI What's new in digital preservation", Issue No. 7; October, 2003 – January, 2004:
http://www.dpconline.org/graphics/whatsnew/issue7.html

Please note that the descriptions of the sites included have been derived from existing text on the sites. While an effort has been made to reflect the scope of the sites, the descriptions have not been vetted by those responsible for the sites. As such they may not be fully up-to-date or comprehensive.

2.
International Sites

International Federation of Library Associations

An international organization representing the interests of library and information services and their users. It is the global voice of the library and information profession. http://www.ifla.org

Association of Records Managers and Administrators (ARMA) International

ARMA International is a not-for-profit association serving more than 10,000 information management professionals in the United States, Canada, and over 30 other nations. Its mission is to provide education, research, and networking opportunities to information professionals, to enable them to use their skills and experience to leverage the value of records, information, and knowledge as corporate assets and as contributors to organizational success. http://www.arma.org

International Council on Archives

ICA is dedicated to the advancement of archives worldwide. Archives, by providing evidence of human activities and transactions, underlie the rights of individuals and States, and are fundamental to democracy and good governance. Archives safeguard the memory of mankind by preserving records of its past. In pursuing the advancement of archives, ICA works for the protection and enhancement of the memory of the world. http://www.ica.org

Electronic Records Committee*

To undertake study and research, to draft guidelines concerning all aspects of current records in an electronic environment from an archival perspective (including creation, preservation, appraisal, access, maintenance, description, authenticity and reliability), to provide professional advice on relevant training programmes, and to promote the exchange of views and *experience in this area.*
http://www.ica.org/body.php?pbodycode=CER&plangue=eng

International Records Management Trust

The Trust was established in 1989 in order to support developing country requirements for managing official government records. The range and complexity of the Trust's program areas and project work has expanded in parallel with the growth and spread of technological applications and with global development concerns, such as good governance, accountability, human rights, economic reform, transparency and accountability and cultural heritage for sustainable development. Its work has demonstrated repeatedly that neither technology nor global development

agendas can be successfully addressed in the absence of effective control of official records. The Trust recognizes that the requirements for managing evidence in an electronic environment are escalating rapidly and that the solutions presently available are inadequate to meet this need. The Trust is therefore committed to providing an expanded level of services and support for developing countries as they make the transition to the electronic age. http://www.irmt.org

Workflow Management Coalition

The WFMC has over 285 member organizations worldwide, representing all facets of workflow, from vendors to users, and from academics to consultants. http://www.wfmc.org

IEEE Metadata and Data Management Information Page

The objectives of the IEEE series of workshops and conferences are to: provide a forum to address meta-data issues facing various communities such as mass storage, large scale distributed computing, document management, and multimedia processing; bring the different communities together for the technical interchange of ideas related to meta-data; hear the various perspectives from the users as well as from the producers of meta-data; facilitate the development and usage of meta-data. http://www.llnl.gov/liv_comp/metadata/metadata.html

Dublin Core Metadata Initiative (DCMI)

The Dublin Core Metadata Initiative is an open forum engaged in the development of interoperable online metadata standards that support a broad range of purposes and business models. DCMI's activities include consensus-driven working groups, global workshops, conferences, standards liaison, and educational efforts to promote widespread acceptance of metadata standards and practices. http://dublincore.org

InterPARES Project: International Research on Permanent Authentic Records in Electronic Systems*

The InterPARES Project is a major international research initiative in which archival scholars, computer engineering scholars, national archival institutions and private industry representatives are collaborating to develop the theoretical and methodological knowledge required for the permanent preservation of authentic records created in electronic systems. The InterPARES Project is based in the School of Library, Archival and Information Studies at the University of British Columbia. http://www.interpares.org/ip2_index.cfm

Collaborative Electronic Notebook Systems Association (CENSA)

CENSA is responsible for driving innovation, convergence, and integration of technologies for building Collaborative Electronic Notebook Systems (CENS) and more advanced systems for R&D team project data management, collaboration, and recordkeeping. Through its market development programs, CENSA hosts major initiatives in automation and information technology that bring committed end users and suppliers together to catalyze expansion of new markets. CENSA emphasizes existing commercial technologies as its starting point for projects. These technologies include groupware, document and workflow management, Web systems and tools, electronic recordkeeping, records management and archiving ... and other hardware and software systems that must be integrated with them ... such as lab instruments, mobile handheld computers, chemoinformatics and bioinformatics tools, LIMS, project data management, and collaborative computing systems. http://www.censa.org

ISO "Archiving Standards" (Open Archival Information System)*

ISO has encouraged the development of standards in support of the long term preservation of digital information obtained from observations of the terrestrial and space environments. ISO has requested that the Consultative Committee for Space Data Systems Panel 2 coordinate the development of those standards. The initial effort has been the development of a *Reference Model for an Open Archival Information System (OAIS)*. That is now being reviewed as an ISO Draft International Standard (DIS). http://ssdoo.gsfc.nasa.gov/nost/isoas

Global Electronic Records Association (GERA)

The Association is providing mutually beneficial information in the form of concrete and detailed specifications, guidelines, and education to regulatory and administrative agencies and global industry. These are being jointly developed by government and industry. Industry needs the education and guidance that only government agencies can provide. Industry can provide government agencies with solutions and experience in building and operating mission-critical systems. The GERA government, industry, nonprofit, and academic partners are developing, reviewing, and providing global acceptance for complete specifications and guidelines for electronic records systems (recordkeeping and permanent archiving). http://www.erecordscentral.org

Global Knowledge Economics Council*

The Global Knowledge Economics Council (GKEC) is a not-for-profit organization formed to discuss and select macro-, meso-, micro-, and firm-level plans, policies, and metrics to measure and increase efficiency of knowledge markets and the quality

of knowledge at all levels. GKEC will meet annually and issue reports on various knowledge-related inputs, outputs, and trends for various countries, industries, and firms worldwide. The GKEC Secretariat also manages the GKEC Education Standards Committee. The country councils are made up of local groups formed to discuss knowledge economic practices related to local country and organization issues. http://www.gkec.org/research.htm

Global Knowledge Partnership

The GKP is a **"network of networks"** with a diverse membership base comprising public, private and not-for profit organizations from both developed and developing countries. http://www.globalknowledge.org

Centre For Collaborative Government

The Centre for Collaborative Government is the public interest research division of Kaufman Thomas & Associates. Its mission is to promote more effective management of the interdependence between government departments, levels of government, and the private or third sectors. We accomplish this by pooling resources and experience from a variety of groups outside the client's organization. We engage experts and stakeholders in working groups, roundtables and conferences to share ideas, experiences and best practices. The result is the delivery of cutting-edge ideas and customized research that increase effectiveness and accountability in public sector initiatives. http://www.kta.on.ca/ktacenter.html

The Commonwealth Centre for Electronic Governance

In a world which continues to make efforts in respect of democratic development, good governance and human rights, **The Commonwealth Centre for Electronic Governance (CCfEG)** will be recognised as a focal point in the use of the new information and communication technologies as a tool for reinventing good governance and will: assist the transition to electronic government (eGovernment) in the initial instance, and to electronic democracy (eDemocracy) in the long run; promote good practice, enhance a sharing of learning experiences, dissemination of information and management of knowledge in electronic government (eGovernment) and electronic democracy (eDemocracy) amongst various human and institutional networks and communities of interest in the Commonwealth and beyond. The Centre is incorporated as a not for profit organization in United Kingdom and part of a program of the *Commonwealth Secretariat*, London, UK, the administrative body of the Commonwealth countries. http://electronicgov.net

Open Archives Initiative

The Open Archives Initiative develops and promotes interoperability standards that aim to facilitate the efficient dissemination of content. The Open Archives Initiative has its roots in an effort to enhance access to e-print archives as a means of increasing the availability of scholarly communication. Continued support of this

work remains a cornerstone of the Open Archives program. The fundamental technological framework and standards that are developing to support this work are, however, independent of the both the type of content offered and the economic mechanisms surrounding that content, and promise to have much broader relevance in opening up access to a range of digital materials. http://www.openarchives.org

World Bank (Evidence based Governance)

The program builds upon an effective partnership between the World Bank and the International Records Management Trust: A video-conference workshop on Current Records Management, Poverty Reduction, and Corruption Control was held in June 2000. High-level civil servants from Ghana, Tanzania, and Uganda shared their experiences and concerns with World Bank task managers, senior managers, and anti-corruption specialists. The project was funded by the Bank's Information Solution Group (ISG). The Information for Accountability Workshops Project, completed in January 2001, developed a methodology for educating civil society and government representatives on the significance of well-managed evidence. Civil servants, records managers, and archivists working with civil society representatives, piloted the workshop in Tanzania and Ghana. The project was funded by the World Bank Danish Trust Fund for Governance. The From Accounting to Accountability Project, completed in March 2001, defined essential issues for managing financial records and created tools for evaluating and monitoring the performance of record-keeping systems. These are intended for use by those designing new systems and those wishing to improve existing ones. The project was funded by the *World Bank InfoDev Fund.*
http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/EXTARCHIVES/0,,contentMDK:20035501~menuPK:56292~pagePK:36726~piPK:36092~theSitePK:29506,00.html

The World Summit on the Information Society

The World Summit on the Information Society (WSIS) is the latest in a long series of world summits organized by the United Nations that deal with central questions of humanity. At the WSIS, information and communication are on the agenda for the first time. The world summit is supposed to develop a common understanding of the information society. Not only the general theme is new, but as well the structure of the summit, which will take place in two parts for the first time in the history of UN summits. The first part of the summit in December 2003 in Geneva will be followed by a second part in Tunis in the year 2005. The preparatory process started with the first meeting of the preparatory committee (PrepCom) in July 2002 which mainly dealt with organizational and process matters. Regional and thematic conferences have been following. They paved the way towards PrepCom2 in February 2003 which developed rough drafts of the final declaration and the action plan. A third PrepCom in September 2003 is supposed to finalise these documents and to deal with the remaining road blocks towards the first part of the summit shortly thereafter. http://www.worldsummit2003.de/en/nav/14.htm

UNESCO Archives Portal

With the Archives Portal, UNESCO provides a single interactive access point to information for archivists and users of archives worldwide. Visitors to the UNESCO Archives Portal can browse through pre-established categories or search for specific words. They can add a new link or modify an already existing link. An electronic Newsletter provides information on new entries. The "In Focus" section presents websites of archives which are particularly interesting. Of particular interest to those involved in digital preservation is a guideline produced by Colin Webb.
http://portal.unesco.org/ci/ev.php?URL_ID=5761&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1081878749

3.
European Sites

Europe's Information Society (European Commission)

The information society, cuts across traditional boundaries. This website is a guide through its many and various aspects, covering for example: the impact of the Information Society on citizenship, education, culture, business, etc.; relevant European Commission programs and initiatives, hosted both here and elsewhere, such as the eEurope action plan, ISTweb, eContent, eSafety. eTen, IDA (Interchange of Data between Administrations), the Internet Action Plan and other calls related to IS programmes and activities are published regularly. Public consultations to promote dialogue with citizens; policy aspects and regulatory framework for electronic communications networks and services; international aspects of the information society.
http://europa.eu.int/information_society/index_en.htm

ERPANET*

ERPANET project aims to establish an expandable and self-sustaining European Initiative, which will serve as a virtual clearinghouse and knowledge-base in the area of preservation of cultural heritage and scientific digital objects. The dominant feature of ERPANET will be the exchanging of knowledge on state-of-the-art developments in digital preservation and the transfer of expertise among individuals and institutions. It also provides commentaries on recent publications, articles, etc., and case studies in organizations. http://www.erpanet.org

Public Sector Information Network PSINet.

PSINet explores the state-of-the-art for access to and exploitation of Public Sector Information in all EU Member States and the Candidate Countries.
http://www.epsigate.org/a_psinet.htm

Forum for Metadata Schemas Implementors

SCHEMAS provides a forum for metadata schema designers involved in projects under the Information Society Technologies (IST) Programme and national initiatives in Europe. SCHEMAS will inform schema implementers about the status and proper use of new and emerging metadata standards. The project will support development of good-practice guidelines for the use of standards in local implementations. It will investigate how metadata registries can support these aims. The SCHEMAS project is funded as part of the Information Society Technologies (IST) Programme, a theme of the European Union's Fifth Framework Programme managed by the Information Society Directorate-General of the European Commission. http://www.schemas-forum.org

Renardus Project*

The project's aim is to improve access to existing Internet-accessible collections of cultural and scientific resources across Europe. The approach being taken is to develop a 'broker' service - a single interface for searching and browsing across existing distributed resource collections produced at a national level. Renardus exploits the success of subject gateways, where subject experts select quality resources for their users, usually within the academic and research communities. This approach has been shown to provide a high quality and valued service, but encounters problems with the ever increasing number of resources available on the Internet. Renardus proposes a distributed model where major subject gateway services across Europe can be searched together through a single interface provided by the Renardus broker. http://www.renardus.org

LEAF Project on Authority Information on Corporate Bodies and Person Names

LEAF (Linking and Exploring Authority Files) is a three year project, started in March 2001,and co-funded by the European Commission Information Society Technologies Programme. It is responsible for developing a model architecture for a distributed search system harvesting existing name authority information aiming at automatically establishing a user needs based common name authority file in a specific sector highly relevant to the cultural heritage of Europe. The project results will be implemented by extending an existing, fully functional, international online Search and Retrieval service network of OPACs that provides information about modern manuscripts and letters, and to extend this into a global multilingual and multimedia information service about persons and corporate bodies based on user needs. http://www.crxnet.com/leaf

The Metadata Engine Project

METAe will develop application software focusing on the automatic recognition and extraction of metadata from printed material, especially books and journals, an omnifont OCR-engine for the recognition of "Fraktur" (a German style of black-letter text type) and other seldom type faces used in European printing history of the development of five historical dictionaries supporting the OCR-engine, an XML/SGML search engine, a open source library for a simple web-application for presenting digitised printed material http://meta-e.aib.uni-linz.ac.at

DAVID - Digital Archiving in Flemish Institutions and Administrations*

DAVID is a project of the Foundation for Scientific Research within the scope of the Max Wildiers Foundation and is a cooperation between the Antwerp City Archives and the Interdisciplinary Centre for Law and Informatics of the University

of Leuven. The purpose is to develop a manual with guidelines for the archiving of digital files. http://www.antwerpen.be/david/website/eng/index2.htm

Testbed Digitale Bewaring (the Netherlands)*

In 1999, the research report 'Digital Preservation: Carrying Authentic, Understandable and Usable Digital Records Through Time' was drawn up. In this report the possibilities of a few technologies and approaches were explored for the long term preservation of digital records. The report shows that it is not yet possible to make a responsible choice from these technologies and approaches. According to the recommendations of the researchers, the Ministry of the Interior and Kingdom Relations and the Ministry of Eductation, Culture and Sciences (the National Archives) decided to establish a 'Testbed' to gain the essential knowledge and experience. The Digital Preservation Testbed is carrying out experiments according to pre-defined research questions to establish the best preservation approach or combination of approaches. The Testbed will be focusing its attention on three different digital preservation approaches - Migration; Emulation; and XML - evaluating the effectiveness of these approaches, their limitations, costs, risks, uses, and resource requirements.
http://www.digitaleduurzaamheid.nl/index.cfm?paginakeuze=186&categorie=2

Metadata Forum, Netherlands, June 2000

Sponsored by the Archives School of the Netherlands, the Archiving Metadata Forum established a metadata meeting in Amsterdam in June 2000. The objectives were: 1.to acquire a better understanding of the main metadata standards initiatives underway around the world 2.to identify commonalities among the different initiatives 3.to identify research issues and establish a research agenda 4.to discuss possible areas of co-operation 5.to position recordkeeping metadata initiatives within the context of the metadata needs and issues of other disciplines 6.to identify metadata requirements within the context of business processes, record keep*ing requirements, and cultures* 7.to explore the possibility of establishing a common infrastructure of research in this field. http://www.archiefschool.nl/engels.htm

National Archives of Denmark

Electronic Records - strategies and requirements

A conversion strategy has been developed at the State Archives for long-term preservation of IT filing systems. Conversion means that data (not applications) are migrated at suitable intervals to ensure that they are continually compliant with current technology. The electronic archival materials which are submitted to the State Archives should therefore be stored in a way that enables data conversion to formats suitable for continuous conversions without significant data loss.
http://www.sa.dk/sa/omarkiverne/english/earchives.htm

Danish Data Archives

The Danish Data Archives (DDA) is a national data bank and documentation and technical service facility for researchers and students in Denmark and abroad. The DDA is an independent unit in the organization of Danish State Archives. http://www.sa.dk/sa/omarkiverne/english/dda.htm

The United Kingdom

e-Envoy

The Office of the e-Envoy is leading the drive to get the UK online, to ensure that the country, its citizens and its businesses derive maximum benefit from the knowledge economy. To support this aim, the Office has three core objectives: to make the UK the best environment in the world for e-commerce by 2002, to ensure that everyone who wants it has access to the Internet by 2005, to make all Government services available electronically by 2005. Overall it is to ensure that the UK is a world leader in the knowledge economy revolution as set out in the UK Online Strategy. http://www.e-envoy.gov.uk

UK Govtalk-initiative

The purpose of this site is to enable the Public Sector, Industry and other interested participants to work together to develop and agree policies and standards for e-government. This is achieved through the UK GovTalk consultation processes. The site is divided broadly into two areas:1. The e-Government Interoperability programme. This part of the site covers all aspects relating to the e-Government Interoperability Framework (e-GIF) and the e-Government Metadata Framework (e-GMF). It provides repositories for draft and agreed XML schemas, best practice and case studies, and also advice on toolkits and other relevant information. 2. e-Gov Communities: This part of the site allows for Communities of Interest to be established and consultations to be conducted by those communities. These communities can relate to any aspect of introducing e-services into the UK public sector. http://www.govtalk.gov.uk

UK The National Archives (TNA): Management of Electronic Records*

By 2004 all central government organizations must be able to store and retrieve their records electronically. This deadline was set in the Modernizing Government White Paper to ensure that departments would be able to meet the demands of working in an electronic environment. This target is set out in more detail in the revised e-Government policy framework for electronic records management. The PRO has produced functional requirements for an electronic records management system, and has since been assessing systems against those requirements. There are also comprehensive Guidelines on the Management, Appraisal and Preservation of Electronic Records, and a route map and milestones to enable departments to meet

the 2004 target. The PRO is now producing a range of toolkits for departments relating to each individual milestone.
http://www.pro.gov.uk/recordsmanagement/erecords/default.htm

PRONOM*

PRONOM is the UK National Archives' online source for information about file formats and software products. PRONOM is a resource for anyone requiring impartial and definitive technical information about the file formats used to store electronic records, and the software products that are required to create, render, or migrate these formats. http://www.records.pro.gov.uk/pronom

UK Central Government Web Archive*

The UK Central Government Web Archive is a selective collection of UK Government websites, archived from August 2003, which has been developed by the National Archives of the United Kingdom, using the services of the Internet Archive. http://www.pro.gov.uk/webarchive/default.htm

National Digital Archive of Datasets*

The National Digital Archive of Datasets (NDAD) is part of the National Archives of the UK. NDAD preserves and provides online access to archived digital data and documents from UK central government departments. Use our extensive catalogues to find out more about the content and context of the datasets, and then view data and digital documents online. http://ndad.ulcc.ac.uk

Joint Information Systems Committee*

The Joint Information Systems Committee (JISC) supports further and higher education by providing strategic guidance, advice and opportunities to use Information and Communications Technology (ICT) to support teaching, learning, research and administration. JISC is funded by all the UK post-16 and higher education funding councils. JISC works with further and higher education by providing strategic guidance, advice and opportunities to use ICT to support teaching, learning, research and administration.
http://www.jisc.ac.uk/index.cfm?name=home

Supporting Institutional Records Management*

The aim of this program is to help institutions to implement institutional records management programs that will meet the requirements of the Freedom of Information Act (2000) and conform to established good practice for the management of records and digital assets throughout their lifecycle. This program builds upon several existing JISC initiatives, especially the Study of the Records Lifecycle and the creation of the Model Action Plan for Achieving Compliance with

the Lord Chancellor's Code of Practice on Records Management.
http://www.jisc.ac.uk/index.cfm?name=programme_supporting_irm

Arts and the Humanities Data Service

The AHDS is a UK national service funded by the Joint Information Systems committee and the Arts and Humanities Research Board. Organized via an Executive a King's College, London, and five Subject Centres from various Higher Education institutions, the AHDS aids the discovery, creation and preservation of digital collections in the arts and humanities. On the AHDS web site you can find out about the work of the AHDS, participate in its training events, consult its publications, and search its wide-ranging collections. http://ahds.ac.uk/index.htm

CURL Exemplars in Digital Archives (CEDARS)*

The Cedars Project is a Higher Education initiative funded by the Joint Information Systems Committee. It officially began on the 1st April 1998. The funding was awarded to the Consortium of University Research Libraries (CURL) and the work was carried out on behalf of CURL by three CURL institutions - Leeds, Oxford and Cambridge. Cedars stands for "CURL exemplars in digital archives" and the main objective of the project was to address strategic, methodological and practical issues and provide guidance in best practice for digital preservation. It accomplished its work on two levels - through practical demonstrator projects which provided concrete practical experience in preserving digital resources and through strategic working groups based on broad concepts or concerns which articulated preferences and made recommendations of benefit to the wider community. The main deliverables of the project were recommendations and guidelines as well as practical robust and scaleable models for establishing distributed digital archives. It is expected that the outcomes of Cedars will influence legislation for legal deposit of electronic materials and feed directly into the emerging national strategy for digital archives currently being developed through the National Preservation Office of the British Library. http://cedars.bodley.ox.ac.uk/cedars/bibliog/as.cfm

Harmony Project

The Harmony Project, a international collaboration funded by DSTC, JISC, and NSF, will investigate a number of key issues in describing such complex multimedia resources in digital libraries: Collaborate with metadata communities to develop and refine developing metadata standards that describe multimedia components. *I*nvestigate a conceptual model for interoperability among community-specific metadata vocabularies. Such a conceptual model should be able to represent the complex structural and semantic *r*elationships in multimedia resources. Investigate mechanisms for expressing such a conceptual model, including technologies currently under development in the W3C (XML, RDF, and their associate schema mechanisms). Develop mechanisms to map between community specific vocabularies using such a conceptual model.
http://www.ilrt.bris.ac.uk/discovery/harmony

Digital Preservation Coalition*

The Digital Preservation Coalition (DPC) was established in 2001 to foster joint action to address the urgent challenges of securing the preservation of digital resources in the UK and to work with others internationally to secure our global digital memory and knowledge base. producing, providing, and disseminating information on current research and practice and building expertise amongst its members to accelerate their learning and generally widen the pool of professionals skilled in digital preservation. Its program objectives are as follows:

- Instituting a concerted and co-ordinated effort to get digital preservation on the agenda of key stakeholders in terms that they will understand and find persuasive.
- Acting in concert to make arguments for appropriate and adequate funding to secure the nation's investment in digital resources and ensure an enduring global digital memory.
- Providing a common forum for the development and co-ordination of digital preservation strategies in the UK and placing them within an international context.
- Promoting and developing services, technology, and standards for digital preservation.
- Forging strategic alliances with relevant agencies nationally and internationally, and working collaboratively together and with industry and research organisations, to address shared challenges in digital preservation.
- Attracting funding to the Coalition to support achievement of its goals and programmes.
  http://www.dpconline.org/graphics/index.html

The Open Archival Information System Reference Model: Introductory Guide*, Brian Lavoie, Office of research, OCLC Online Computer Library Center, Inc., January, 2004. http://www.dpconline.org/docs/lavoie_OAIS.pdf

Digital Preservation Project, University of Edinburgh*

The Special Collections Department in the University Library recently initiated a Digital Preservation project to provide **advice** and act as a **focus** to raise awareness, university-wide, of Digital Preservation issues. For any organisation or department that produces electronic information, a strategic preservation plan is vital to ensure the physical reliability, continued usability, and intellectual integrity of their files. The project's aims were to recommend and produce guidelines for the future publishing of University web sites and electronic materials, and to produce a comprehensive strategy for the permanent preservation of the University's core electronic publications. http://www.lib.ed.ac.uk/sites/digpres/index.shtml

Records Management Society

The Records Management Society of Great Britain, launched in 1983, recognized the ever-increasing number of people working in the fields of records and information management. All those concerned with records and information, regardless of their professional or organizational status or qualifications, can join the Society. Organizations wishing to develop records or information systems and those which provide services in these fields are also welcome. Through close and regular contact with its own members and with related professions, the Records Management Society of Great Britain encourages the highest professional standards. Regular meetings are held to hear guest speakers or to hold discussions on topics as wide-ranging as office technology, organization of records services, legal aspects of records management and the role of service companies. The Society is also developing its own training programs and extending its range of technical and information publications. http://www.rms-gb.org.uk

UKOLN

United Kingdom Libraries and On-line Networks (UKLON) is a centre of expertise in digital information management, providing advice and services to the library, information, education and cultural heritage communities by: influencing policy and informing practice; promoting community-building and consensus-making by actively raising awareness; advancing knowledge through research and development; building innovative systems and services based on Web technologies; acting as an agent for knowledge transfer. UKOLN is based in Bath, England.
http://www.ukoln.ac.uk/ukoln

Digital Curation Centre*

The scientific record and the documentary heritage created in digital form are at risk, by technology obsolescence and by the fragility of digital media. Working with other practitioners, the Curation Centre will support UK institutions to store, manage and preserve these data to ensure their enhancement and their continuing long-term use. The aim of the Centre is to provide a national focus for research into curation issues and to promote expertise and good practice, both national and international, for the management of all research outputs in digital format. Led by the University of Edinburgh, the Digital Curation Centre will be run by a consortium of four partner institutions: the University of Edinburgh (Informatics, Law, Information Services and leading research institutes) and the University of Glasgow (HATII and Information Services), which together host the National eScience Centre; UKOLN, at the University of Bath; the Council for the Central Laboratory of the Research Councils (CCLRC - which operates the Rutherford and *Daresbury Laboratories).* http://www.jisc.ac.uk/index.cfm?name=dcc_news_040204

4.
Australian Sites

National Office for the Information Economy

This is a useful gateway to information about the government on-line initiatives of the Australian government. The Government Online Strategy contains eight strategic priority areas:

1. Agencies to take full advantage of the opportunities the Internet provides;
2. Facilitation of enablers such as authentication, metadata standards, electronic publishing and record keeping guidelines, accessibility, privacy and security;
3. Enhancement of government online services in regional Australia;
4. Enhancement of the impact of the Government Online initiatives on development in the Australian IT industry;
5. Government business operations to go online;
6. Monitor best practice and progress;
7. Facilitate cross agency services; and
8. Communicate with Stakeholders.

http://www.dcita.gov.au/ie

Archives of Australia

Australian archival organisations looking for ways to take advantage of the resources the World Wide Web offers were quick to develop the first Archives of Australia network. They have been just as keen to take part in the internetworking opportunities offered by Australia's Cultural Network (ACN) with 'sub-networks' of libraries, museums, and archives. The National Archives of Australia is responsible for the ACN Archives of Australia sectoral network project, set up in 1997. The aim of the project is to assist archives large and small, whether they already have web sites or not, to explore the opportunities offered by the web. In addition, the project is intended to provide more information for the public on archives and on their place in the nation's cultural life as well as their role in facilitating the management of government records. http://www.archivenet.gov.au/jsredirect.exe

National Archives of Australia: Introduction to E-permenance*

E-permanence represents the new standard in recordkeeping developed by the National Archives for use by all Commonwealth Government agencies. It is reflects a modern way of creating and managing records and takes account of the new electronic environment. http://www.naa.gov.au/recordkeeping/default.html

Digital Records*
http://www.naa.gov.au/recordkeeping/er/summary.html

How Digital records are transferred to the long-term digital repository*
http://www.naa.gov.au/recordkeeping/preservation/digital/digital_repository.html

National Archives Green Paper: An Approach to the Preservation of Digital Records*
http://www.naa.gov.au/recordkeeping/er/digital_preservation/summary.html

State Records Authority, New South Wales*

State Records is concerned with all aspects of recordkeeping, ranging from measures to ensure that public officials create records in the course of their duties in the first place, through the management of State records in agencies (the traditional role of records management), to preserving and making records of continuing value accessible as State archives (the traditional role of archives institutions).
http://www.records.nsw.gov.au

Future Proof: Ensuring the accessibility of equipment/technology dependent records*
http://www.records.nsw.gov.au/publicsector/rk/guidelines/techdependent/TechDependentTOC.htm

State of Victoria Electronic Records Project*

The specifications for electronic records are designed to ensure uniformity in record structure and management without limiting a public office's choice in systems and support processes for business activity. The first specification (PROS 99/007 Specification 1 System Requirements for Archiving Electronic Records) defines the formal system requirements and structure required for record types produced in electronic systems compliant with this standard.
http://www.prov.vic.gov.au/vers/vers/default.htm

Applying the Australian Government Locator Service (AGLS) Metadata Standard in Commonwealth Agencies, 2000

These resources range from strategies and policies on recordkeeping in the Commonwealth to more detailed information, advice, standards, guidelines and manuals. A number of documents on this site provide a broad perspective on recordkeeping issues in relation to Commonwealth agencies.
http://www.naa.gov.au/recordkeeping/gov_online/agls/guidelines/intro.html

Pandora Archive - Preserving and Accessing Networked Documentary Resources of Australia*

As it is conceived so far, the national model consists of a network of distributed archives, with each of the National and State libraries working to an agreed set of principles and actions, and gathering the titles for which they accept responsibility into either the PANDORA Archive or an archive maintained within their own institution. http://pandora.nla.gov.au/index.html

National Library of Australia: Preserving Access to Digital Information (PADI)*

The National Library of Australia's Preserving Access to Digital Information (PADI) initiative aims to provide mechanisms that will help to ensure that information in digital form is managed with appropriate consideration for preservation and future access. Its objectives are: to facilitate the development of strategies and guidelines for the preservation of access to digital information; to develop and maintain a web site for information and promotion purposes; to actively identify and promote relevant activities; and to provide a forum for cross-sectoral cooperation on activities promoting the preservation of access to digital information. The PADI web site is a subject gateway to digital preservation resources. http://www.nla.gov.au/padi

Digital Collections Policy*

This policy statement indicates the directions the National Library of Australia intends to take in preserving its own digital collections, and in collaborating with others to enable the preservation of other digital information resources likely to be of value to NLA users. The National Library's preservation role is guided by its key objective to preserve and maintain all Australian and significant non-Australian library materials to ensure they are available for current and future use. This objective applies to both digital and non-digital information resources, although the Library recognizes that it will use different methods and draw on different skills, procedures and partnerships, for managing digital and non-digital collections. The National Library also seeks to help others preserve the Australian information resources for which they accept responsibility. http://www.nla.gov.au/policy/digpres.html

Records Management Association of Australia

The purpose of the Association is to market records management and the skills of the records management profession to provide a forum to debate and develop records management principles and record keeping techniques. The Records Management Association of Australia promotes best practices in records management as a vital business activity. http://www.rmaa.com.au

Australian Society of Archivists

The Australian Society of Archivists aims to: promote a professional identity amongst archivists, promote the keeping care and use of archives and encourage research and development in all areas of archival practice, establish and maintain standards of archival practice and professional conduct amongst archivists, including standards of archival qualifications and professional training, encourage the responsible use of archives including cooperating with other organisations and groups with common interests and concerns, encourage communication and cooperation amongst archivists, their institutions and the users of archives, publish and disseminate information relevant to the archival profession http://www.archivists.org.au

5.
New Zealand Sites

Archives New Zealand

Continuum – Create and Maintain*

Continuum - Create and Maintain is a whole-of-government approach to recordkeeping. The Continuum programme has been designed to provide the most effective tools and services to government agencies to enable them to meet best practice recordkeeping standards. It will assist agencies to develop their own programmes to fulfill business and accountability requirements, and promote good records management so that the most significant records of government are preserved for current and future generations. Continuum is a comprehensive programme aimed at building strong, cooperative and mutually beneficial partnerships between Archives New Zealand and government agencies.
http://www.archives.govt.nz/continuum

6.
Canadian Sites

Electronic Commerce Task Force

The Canadian Electronic Commerce Strategy addresses four key sets of interdependent issues. First, it aims to increase consumer and business confidence in electronic commerce by addressing security, privacy and consumer protection concerns. Second, it aims to clarify the rules of the digital marketplace by removing barriers to the use of electronic commerce and by updating the rules governing how the market functions, including legal and commercial frameworks, financial issues and taxation, and intellectual property protection. Third, the strategy focusses on developing and strengthening the technical information infrastructure, thereby ensuring that the communications and information networks are able to support the growth of electronic commerce and allow interoperability. The fourth and final element of the Canadian Electronic Commerce Strategy is realizing the social and economic benefits associated with the early adoption of electronic commerce. The purpose is to leverage the maximum social and economic potential from electronic commerce. http://e-com.ic.gc.ca/epic/internet/inecicceac.nsf/en/h_gv00002e.html

Crossing Boundaries

The objectives of Crossing Boundaries (now in its third phase) are: To seek the commitment of senior officials, especially elected officials, on ways of tackling the issues and obstacles of e-government. We will develop a set of recommended policy directions to help decision-makers translate the results of our work into more concrete changes; To explore the ways in which ICTs are affecting government both in Canada and around the world, to identify approaches being taken in other jurisdictions and the gaps that still need to be addressed. Ultimately, we will create a coherent and integrated account of e-government - a storyline - that makes sense of the many different perspectives that stakeholders, ranging from government bureaucrats and politicians to anti-globalization protesters and the business community, have on how ICTs should be used to transform government; to build and facilitate a large network of stakeholders across Canada, and beyond, who are committed to working together to realize the goals of e-government. Crossing Boundaries is supported by over 12 federal departments of the Government of Canada, and led by Donald Lenihan, Director of the Centre for Collaborative Government.
http://www.crossingboundaries.ca/index.php?page=other_pub&lang_id=1&page_id=14

Chief Information Officer Branch (CIOB), Treasury Board Secretariat*

The Chief Information Officer (CIO) is responsible for determining and implementing a strategy that will accomplish government's IT goals. The role of the CIO includes: providing leadership, co-ordination and broad direction in the use of IT; facilitating enterprise-wide solutions to horizontal IT issues; serving as technology strategist and expert advisor to Treasury Board Ministers and senior officials across government. http://www.cio-dpi.gc.ca/cio-dpi/index_e.asp

CIOB Information Management*
http://www.cio-dpi.gc.ca/im-gi/index_e.asp

CIOB Information Policy*
http://www.cio-dpi.gc.ca/ip-pi/index_e.asp

CIOB Infrastructure (PKI/IM and IT standards)*
http://www.cio-dpi.gc.ca/inf-inf/index_e.asp

Records Document Information Management Shared Systems Initiative*

RDIMS is the Records, Document and Information Management System, a suite of products, designed to provide Federal Government departments with an economical records and document management software. This site contains information about the initiative, the partners and the system itself. http://www.rdims.gc.ca

Government of Canada Core Subject Thesaurus

The GoC Core Subject Thesaurus is to be used as a source of standardized terminology for the indexing and retrieval of information resources in various forms. Its main function is to standardize the external form and the meaning of index terms, thus ensuring that a particular concept or subject will always be represented in the same way in the index. http://en.thesaurus.gc.ca

Government of Canada Internet Guide, Treasury Board of Canada, Ottawa

The policy requirements govern the use of the Internet for communications, including: service to the public, requiring government institutions to provide the public with prompt, courteous and impartial service that is sensitive, responsive and protective of public rights, and good management and coordination, requiring the integration of communications into corporate management
http://www.cio-dpi.gc.ca/ig-gi/index_e.asp

The Institute for Government Information Professionals - Public Works and Government Services Canada

The Institute offers both intensive education and just-in-time training in pure technology (foundation, software technology, telecommunications), project management, business essentials for IM/IT professionals and GOL readiness.
http://www.pwgsc.gc.ca/institut/text/index-e.html

Access to Information and Privacy (TBS)

The President of the Treasury Board is the Minister responsible for government-wide administration of the legislation. This includes issuing to the public a directory of federal government information and related guides known as Info Source. The Secretariat, as the lead agency, co-operates with the Department of Justice in the area of legislative amendments and with the Privy Council Office regarding Cabinet confidences. The Secretariat also initiates and facilitates consultations with the Offices of the Information and Privacy Commissioners on policy matters. As part of the group of Info Source publications, materials exist to assist the Access to Information and Privacy community. Info Source: Sources of Federal Employee Information will help you, as a current or former federal employee, to locate your personal information held by the government. The annual Info Source Bulletin contains statistics of requests made under the Access to Information Act and the Privacy Act, and summaries of federal court cases. Reference tools for the ATIP community consists of: Access to Information Policy, Cost Studies, Forms for ATIP Coordinators, Implementation Reports, Information Notices, List of ATIP Coordinators, Privacy and Data Protection Policy.
http://www.tbs-sct.gc.ca/gos-sog/atip-aiprp/index_e.asp

Access to Information and Privacy, Justice Canada

The information presented in this web site is intended to provide the user with resources related to Canadian laws and policies dealing with access to information and privacy, with a particular emphasis on the federal Access to Information Act and Privacy Act. http://canada.justice.gc.ca/en/ps/atip

Access to Information Review Task Force

The Task Force has been mandated to make recommendations to the government on how to improve access to government information for all Canadians. Its final report was released on June 12, 2002. http://www.atirtf-geai.gc.ca/home-e.html

Protection of Personal Information and Electronic Documents Act

An Act to support and promote electronic commerce by protecting personal information that is collected, used or disclosed in certain circumstances, by providing for the use of electronic means to communicate or record information or transactions and by amending the Canada Evidence Act, the Statutory Instruments Act and the Statute Revision Act
http://www.parl.gc.ca/36/2/parlbus/chambus/house/bills/government/C-6/C-6_4/C-6_cover-E.html

National Archives - IM Product list for the federal government

This site contains a list of the products produced to support the management of government records. They cover a range of topics from the use of thesauri for the establishment of records classification schemes to the management of electronic records in the electronic work environment. Many of the products can be downloaded from the site in a variety of formats.
http://www.archives.ca/06/0612_e.html

National Library of Canada

The National Library is responsible for collecting and preserving Canada's published heritage so that it is available for present and future generations of Canadians. Under its mandate the National Library also serves as a depository for government publications, provides support to the federal library community, provides leadership for the Canadian library network, provides models and standards for access to and preservation of electronic publications.
http://www.collectionscanada.ca/index-e.html

Inventory of Canadian Digital Initiatives

The Canadian Inventory of Digital Initiatives provides descriptions of Canadian information resources created for the Web, including general digital collections, resources centred around a particular theme, and reference sources and databases. The database provides project/resource names, participating organizations, general and technical descriptions, subject categories (broad Dewey decimal classes), contact information and other details. All institutions or individuals are encouraged to submit an entry about the digital information resources they are currently creating, planning or have completed.
http://www.collectionscanada.ca/initiatives/index-e.html

Information Management Forum

The Information Management Forum, co-chaired by Treasury Board Secretariat and the National Archives of Canada, was established in January 1997 to bring together those Directors (or their equivalents) from departments and agencies in the Government of Canada who share a common interest regarding the effective management of information. Represented on the Forum are lead agencies such as Treasury Board Secretariat, the National Archives of Canada, the National Library of Canada and Justice Canada, as well as associations such as the Council of Federal Libraries, the Records Management Institute, the Association of Records Managers and Administrators, and the Data Processing Institute. While its initial focus had been on resolving issues associated with the management of government records, the sphere of interest of the forum has broadened to include all information management issues. The purpose of the Forum is to allow participants to share their experiences and to serve as a mechanism for the resolution of information management issues identified at the government-wide level. The Forum is also tasked with investigating potential future IM trends and ensuring the government is well prepared for any possible impacts. While the forum meets approximately every 6 weeks, considerable work is undertaken in the numerous working groups that have been established to address information management issues identified by Forum members. http://www.imforumgi.gc.ca/home_e.html

Alliance of Libraries, Archives and Records Management (ALARM)*

The Alliance of Libraries, Archives and Records Management is an employer/employee forum with representatives from libraries, archives and records management organizations who are working to identify and act on shared human resource issues. This cooperation is mutually beneficial as the skills needed, the forms of material handled, and the clients served increasingly overlap. http://www.fis.utoronto.ca/people/affiliated/alarm/index.htm

The Council of Federal Libraries (CFL)

The Council of Federal Libraries (CFL) is an organization of federal government libraries established in 1976 by the National Librarian of Canada as a means of coordinating library services in departments, branches and agencies of the Government of Canada. The Council recognizes two interdependent factors: 1) the leading role of the *National Library* in coordinating and supporting access to Canada's published heritage, resource sharing and library development among Canadian libraries, and 2) the need for cooperation and concerted action within the community of federal libraries across Canada. http://www.collectionscanada.ca/cfl-cbgf

Records Management Institute

To provide effective leadership and support to the members of the recorded information management community by: supporting and promoting sound recorded information management techniques , procedures and practices; encouraging cooperation and exchange of information with other organisations or associations relating to recorded information management; organising, sponsoring and promoting conferences and/or training sessions for the development and enhancement of institute members and the recorded information management community; participating, as requested, on committees and councils; developing, amending and issuing professional and technical information related to recorded information management; and providing a forum through which the concerns of members may be expressed and ideas, information and experiences shared, on all matters affecting recorded information management. http://www.rmicanada.com/home_e.html

Association of Public Sector Information Professionals

The Association of Public Sector Information Professionals: DPI, is a volunteer not-for-profit Canadian federal organization that promotes the effective application of Information Management and Technology (IM/IT) in the Federal Government of Canada and other public sector jurisdictions by providing free seminars, a low cost Professional Development Week (PDW), and other events. http://www.dpi-canada.com

University of Manitoba

The Manitoba masters program in archival studies is in its eleventh year of operation and is well established at the University of Manitoba and University of Winnipeg. It has been well received by the archival profession and students are finding employment, making their way in the activities of the profession, and publishing their first reviews and articles. The curriculum follows the Association of Canadian Archivists' guidelines for curricula in master's programs in archival studies. The archival field of study has six components: study of the history of recorded communication (focusing on the evolution of archival records and the perspectives archivists bring to the study of recorded communication); study of archival institutions and functions; study of history; an opportunity for work experience in archives (through the internship); research in archival studies (mainly through a thesis); an elective in an area of study (usually outside history) which provides knowledge which archivists need; students typically take an elective in administrative studies or computer systems management from the Faculty of Management at the University of Manitoba. http://www.umanitoba.ca/faculties/arts/history/archives

University of Toronto

The Faculty of Information Studies is committed to being an internationally significant Faculty providing excellent professional education based on an understanding of the theory and practice underlying information generation,

organization, and use, and to the stimulation and dissemination of research. The goals of the program are as follows: to educate information specialists who can respond to the changing information practices and needs of society; to contribute, through research and publication by both faculty and students, to the continuous expansion and critical assessment of the body of knowledge underlying the information and archives sciences; to participate in the development of theory concerning information, where it is found, and how it is used, and in the application of new technological developments to the preservation and communication of information…; to provide leadership in defining the social responsibility of information professionals to provide information services for all…; to assist information professionals to review and assess the body of knowledge of librarianship, archive administration and information systems …; to maintain liaison with professionals and professional associations, to develop a national and an international role for the Faculty and to pursue avenues of mutual cooperation. http://www.fis.utoronto.ca/about/mission/index.htm

University of British Columbia

SLAIS is in the business of preparing professionals to exercise leadership in planning, implementing, and promoting the preservation, organization and effective use of society's recorded information and ideas. It offers the master's degree in Library and Information Studies and the master's degree in Archival Studies. In addition, it sponsors a multidisciplinary Master of Arts in Children's Literature with five other departments and a master's degree in Teacher-librarianship with the *Faculty* of Education. Opportunities are also available for post-master's study. Accredited by the American Library Association with the Canadian Library Association, SLAIS is an internationally recognized School with innovative programs and exceptional research productivity. http://www.slais.ubc.ca/about/about.htm

7.
United States Sites

FDTF Frequently Used Sites - U.S. Government Information

The purposes of the Government Documents Round Table are: to provide a forum for discussion of problems and concerns, and for the exchange of ideas by librarians working with government documents; to provide a force for initiating and supporting programs to increase availability, use and bibliographic control of documents; to increase communication between documents librarians and other librarians; to contribute to the extension and improvement of education and training of documents librarians.
http://www.library.vanderbilt.edu/romans/fdtf.html

DG.O (Digital Government)

DG.O is a collaboration among academic researchers, government agencies, and the private sector that promotes National Science Foundation (NSF)-sponsored emergent information technologies by creating research partnerships. dg.o provides a forum in which partners can work, learn from each other, discover new research opportunities, and in which potential collaborators can be matched based upon research domain and other common interests. dg.o seeks to assist in the formation of research collaborations, leverage information technology research and identify financial resources to help build the Digital Government of the 21st Century.
http://www.diggov.org

Global Information Locator Service

This site contains useful information and links on the Global Information Locator Service, a new approach designed to address one of the most crucial challenges being faced in the 21st Century: enabling people to find and retrieve information easily even as information sources expand and diversify. Fundamentally, GILS is about managing information content, not just picking new information technologies.
http://www.gils.net

FedWorld U.S. Government Information Locator Service

The Government Information Locator Service (GILS) is essentially a card catalogue. It identifies public information resources throughout the U.S. Federal Government, describes the information available in those resources, and provides assistance in obtaining the information. Ultimately, GILS consist of a decentralized collection of agency-based information locators and associated information services. GILS supplements other agency information dissemination mechanisms and commercial

information sources. GILS uses network technology and international standards for information search and retrieval so that information can be retrieved in a variety of ways, and so that GILS users can find other information resources worldwide. GILS provides automated linkages that facilitate electronic delivery of online information products and services. http://www.fedworld.gov

Digital Library Federation

The Digital Library Federation (DLF) is a consortium of libraries and related agencies that are pioneering in the use of electronic-information technologies to extend their collections and services. Through its members, the DLF provides leadership for libraries broadly by: identifying standards and "best practices" for digital collections and network access; coordinating leading-edge research-and-development in libraries' use of electronic-information technology; and, helping start projects and services that libraries need but cannot develop individually. The DLF operates under the administration umbrella of the Council of Library and Information Resources. http://www.diglib.org/dlfhomepage.htm

National Digital Information Infrastructure and Preservation Program

The U.S. Congress asked the Library of Congress to lead a collaborative project, called the National Digital Information Infrastructure and Preservation Program. In December 2000, Congress passed special legislation (Public Law 106-554) in recognition of the importance of preserving digital content for future generations, appropriating $100 million to the Library of Congress to lead this effort. (A government-wide rescission of .22 percent in late December 2000 reduced this special appropriation to $99.8 million.) The Digital Preservation Program will seek to provide a national focus on important policy, standards and technical components necessary to preserve digital content. Investments in modeling and testing various options and technical solutions will take place over several years, resulting in recommendations to the U.S. Congress about the most viable and sustainable options for long-term preservation. The Library will work jointly with the Secretary of Commerce, the director of the White House Office of Science and Technology Policy, and the National Archives and Records Administration.
http://www.digitalpreservation.gov

National Association of Government Archives and Records Administrators (NAGARA)

The National Association of Government Archives and Records Administrators (NAGARA) is a professional organization dedicated to the effective use and management of government information and publicly recognizing their efforts and accomplishments. http://www.nagara.org

National Archives and Records Administration

Center for Electronic Records*

The National Archives and Records Administration (NARA) has in its custody over 100,000 electronic records files. This site describes the National Archives electronic records collection and its involvement in the archival management of electronic records generated in the federal government.
http://www.archives.gov/research_room/center_for_electronic_records/center_for_electronic_records.html

Electronic Records Archives (ERA) Program*

The ERA concept emerged from research sponsored by NARA principally on the articulation of an information management architecture for a persistent digital archives. This site contains an overview of the initiative and links to important sites representing major electronic records research activities.
http://www.archives.gov/electronic_records_archives/index.html

National Centre for Supercomputing Applications (University of Illinois): National Scientific Data Management: Applications with Electronic Records*

Applications of Scientific Data Management Tools and Automated Classification Techniques for the Management of Electronic Records is a project sponsored by the National Archives and Records Administration (NARA). Through this project the National Center for Supercomputing Applications (NCSA) is investigating applications of advanced data management and I/O techniques for addressing the challenges of managing electronic records.
http://www.ncsa.uiuc.edu/NARA/index.htm

San Diego Supercomputer Project*

This project is one of a series of projects supported by NARA in partnership with others to explore the issues and solutions for the archival management of electronic records. http://www.sdsc.edu

Consultative Committee for Space Data Systems*

The major space agencies of the world recognize that there are benefits in using standard techniques for handling space data and that, by cooperatively developing these techniques, future data system interoperability will be enhanced. In order to assure that work towards standardization of space-related information technologies provides the maximum benefit for the interested agencies, both individually and collectively, an international Consultative Committee for Space Data Systems (CCSDS) is established as a forum for international cooperation in the development of data handling techniques supporting space research, including space science and

applications, for exclusively peaceful purposes.
http://www.ccsds.org/about/charter.html

Department of Defense (DOD) Standard: Records Management Application*

The JITC performs certification testing of RMA products for compliance with DoD 5015.2-STD. It is DoD policy that only certified products be acquired by DoD organizations. Products that have been successfully tested are listed in the certified products register section. Additionally, vendor and product information are available though the certified products register section. http://jitc.fhu.disa.mil/recmgt

New York State Archives, "Models for Action: Developing Practical Approaches to Electronic Records"*

The Models for Action project, undertaken through the late 1990's and ongoing seeks to find practical solutions to electronic recordkeeping in networked computing environments. The project incorporates principles from business process analysis, information systems development, electronic records management and archival preservation in order to find solutions that address recordkeeping at all stages of the records life cycle and -- more importantly -- within the context of the business process which the records support.
http://www.ctg.albany.edu/publications/reports/models_for_action

Center for Technology in Government, New York

The Center for Technology in Government (CTG) works with government to develop information strategies that foster innovation and enhance the quality and coordination of public services. It conducts applied research and partnership projects on the policy, management, and technology issues surrounding information use in the public sector. http://www.ctg.albany.edu

Preserving the Electronic Records Stored in a Records Management Application

The State Archives of Michigan and the San Diego Supercomputer Center (SDSC) want to develop and test a model for preserving the records in Michigan's Records Management Application (RMA) environment. While the RMA is capable of storing and providing access to electronic records, it cannot ensure that they remain accessible as software becomes obsolete. http://www.sdsc.edu/PERM

Internet Archive

The Internet Archive is building a digital library of Internet sites and other cultural artifacts in digital form. Like a paper library, we provide free access to researchers, historians, scholars, and the general public. The Internet Archive, working with Alexa Internet, has created the Wayback Machine. The Wayback Machine makes it possible to surf more than 10 billion pages stored in the Internet Archive's web archive. The Wayback Machine was unveiled on October 24th, 2001 at U.C. Berkeley's Bancroft Library. Visit the Wayback Machine by entering an URL or clicking on specific collections. http://www.archive.org

Research Libraries Group, *Preserving Digital Information*: Final Report and Recommendations*

At the end of 1994 the Commission on Preservation and Access (CPA) and RLG created a Task Force on Archiving of Digital Information charged with investigating and recommending means to ensure "continued access indefinitely into the future of records stored in digital electronic form." The 21-member task force, completed their final report in 1996.
http://www.rlg.org/ArchTF/index.html

Cornell University Department of Preservation and Conservation*

This DLI2 project (PRISM) is a four-year collaborative effort between the CUL and the Cornell's Computer Science Department to investigate and develop policies and mechanisms needed for information integrity in the context of a component-based digital library architecture. The key research areas include long term survivability of digital information, reliability of information resources and services, interoperability, and security (the privacy rights of users of information and the intellectual property rights of content creators), and metadata that makes it possible to ensure information integrity in digital libraries. At the heart of this project is translating the traditional preservation strategies to the digital realm in order to support the development of digital preservation tools and mechanisms.
http://www.library.cornell.edu/iris/research/prism/index.html

University of Michigan*

Digital Library Project*

The purpose of the UMDL is to define and incrementally develop interfaces and infrastructures for users and providers such that intellectual work (finding, creating, and disseminating knowledge) is embedded in a persistent, structured context even though the underlying networked system is evolving. The infrastructure should support extensible ontologies (meta descriptions of collections and services) for allowing components in the digital library to self-organize, dynamically teaming to

form structures and services that users need. Principles from economics are being used to efficiently allocate resources and provide incentives for continual improvement to networked goods and services. This approach should enable third parties to join or use UMDL technologies to define and manipulate agents, facilities, and ontologies so that the web of resources grows in an orderly but decentralized way. http://www.si.umich.edu/UMDL

CAMiLEON*

CAMiLEON is a research project that is investigating emulation as a digital preservation strategy. The project is a collaborative effort of researchers at the School of Information, University of Michigan (USA) and the University of Leeds (UK). The CAMiLEON project is funded by the National Science Foundation (USA) and the Joint Information Systems Committee (UK). CAMiLEON stands for Creative Archiving at Michigan and Leeds: Emulating the Old on the New http://www.si.umich.edu/CAMILEON

Indiana University Electronic Records Project*

The IU Electronic Records Project was designed to implement and test the "Functional Requirements for Evidence in Recordkeeping" model developed by David Bearman, Richard Cox, and the project personnel associated with the University of Pittsburgh Electronic Records Project. To achieve these goals, IU project personnel designed four distinct stages of development for the project. Stage 1: Application: Develop a methodology for applying the "Functional Requirements for Evidence in Recordkeeping" to IU information systems. Stage 2: Evaluation: Review and evaluate IU information systems in terms of the "Functional Requirements for Evidence in Recordkeeping" and the "Metadata Specifications Derived from the Functional Requirements" developed at the University of Pittsburgh. Stage 3: Recommendation: Develop and submit a set of recommendations designed to improve the performance of the system as a recordkeeping system. Stage 4: Revision: Critique and, if necessary, recommend revisions or additions to the "Functional Requirements for Evidence in Recordkeeping" and the "Metadata Specifications." And, more broadly, critique the methodology developed in the IU project, including its use of the Pittsburgh models, in terms of effectiveness, cost, user acceptance, and skills required to implement. http://www.indiana.edu/~libarch/ER/index.html

University of Virginia: The Fedora™ Project*

The Fedora project was funded by the Andrew W. Mellon Foundation to build an open-source digital object repository management system based on the Flexible Extensible Digital Object and Repository Architecture (Fedora). The new system demonstrates how distributed digital library architecture can be deployed using web-based technologies, including XML and Web services. Jointly developed by the University of Virginia and Cornell University, the system completely implements the Fedora architecture that was originally conceived of at Cornell. Fedora is a general-

purpose digital object repository system that can be used in whole or part to support a variety of use cases including: institutional repositories, digital libraries, content management, digital asset management, scholarly publishing, and digital preservation. http://www.fedora.info

Encoded Archival Description (EAD)

The EAD Document Type Definition (DTD) is a standard for encoding archival finding aids using the Standard Generalized Markup Language (SGML). The standard is maintained in the Network Development and MARC Standards Office of the Library of Congress (LC) in partnership with the Society of American Archivists. http://lcweb.loc.gov/ead

The Long Now Foundation

The Long Now Foundation was officially established in 1996 to develop the Clock/Library Projects as well as to become the seed of a very long term cultural institution. It has been nearly 10,000 years since the end of the last ice age and the emergence of modern civilization. Progress during that time was often measured on a "faster/cheaper" scale. The Long Now Foundation seeks to promote "slower/better" thinking and to focus our collective creativity on the next 10,000 years. http://www.longnow.org/about/about.htm

National Initiative for a Networked Cultural Heritage

The National Initiative for a Networked Cultural Heritage (NINCH) is a diverse nonprofit coalition of arts, humanities and social science organizations created to assure leadership from the cultural community in the evolution of the digital environment. The Initiative began in 1993 as a collaborative project of the American Council of Learned Societies, the Coalition for Networked Information, and the Getty Information Institute, an operating program of the J. Paul Getty Trust. http://www.ninch.org

The SDSC Storage Resource Broker (SRB)

The SDSC Storage Resource Broker (SRB) is client-server middleware that provides a uniform interface for connecting to heterogeneous data resources over a network and accessing replicated data sets. SRB, in conjunction with the Metadata Catalog (MCAT), provides a way to access data sets and resources based on their attributes and/or logical names rather than their names or physical locations. http://www.npaci.edu/DICE/SRB/index.html

Committee on Electronic Records and Information Systems (CERIS): Status of the Preservation of Electronic Records by State Archives *

In July 2003 the National Association of Government Archives and Records Administrators (NAGARA) Committee on Electronic Records and Information Systems (CERIS) surveyed 50 state archives to determine if they were acquiring government electronic records, and if they had preservation plans in place for these records. This report contains survey results and analysis.
http://www.nagara.org/news/ceris_report.pdf

PAT Project, San Diego Supercomputer Project

The PAT project is a collaboration between the San Diego Supercomputer Center and several archival institutions across the United States. The goal is to conduct case studies that test the ability to implement the SDSC's Storage Resource Broker (SRB) data grid (http://www.npaci.edu/DICE/SRB) technology using a variety of archival collections. This is an optimal opportunity to test a community model for electronic records management, with archival and technological functions practically and appropriately allocated in a distributed network. http://www.sdsc.edu/PAT

8.
Journals

RLG Diginews

RLG DigiNews is a bimonthly Web-based newsletter produced by the Research Libraries Group and intended to: focus on issues of particular interest and value to managers of digital initiatives with a preservation component or rationale; provide filtered guidance and pointers to relevant projects to improve awareness of evolving practices in image conversion and digital archiving; announce publications (in any form) that will help RLG staff attain a deeper understanding of digital issues.
http://www.rlg.org/preserv/diginews

Journal of Digital Information

JoDI is supported by the British Computer Society and Oxford University Press JoDI published its first papers in April 1997, when it was one of very few electronic-only journals. It continues as an electronic-only journal dedicated to the publication of peer reviewed papers on the management, presentation, and use of digital information. http://www.jodi.ecs.soton.ac.uk

Council on Library and Information Resources (CLIR)

CLIR works to ensure the well-being of the scholarly communication system upon which knowledge creation depends. CLIR's agenda embraces the entire range of information resources and services, from traditional library and archival materials to emerging digital formats, and the entire network of organizations that gather, catalog, store, preserve, distribute, and provide access to information.
http://www.clir.org/pubs/issues/issues.html

9.
Other Key Sources

"The State of Digital Preservation: An International Perspective", Conference Proceedings, Institutes for Information Science, Council on Library and Information Resources, April 24-25, 2002 http://www.clir.org/pubs/abstract/pub107abst.html

European Expert Seminar on Methods of digital archival description and access, November 21-22, 2002, Copenhagen http://www.sa.dk/sa/omarkiverne/english/earchives.htm

Archives: Adapting to the Digital Age, September 24, 2003, Conference, The National Archives of the UK, London, England
http://www.dpconline.org/graphics/events/for24sept.html

"Practical Experiences in Digital Preservation", Conference, April 2003, The National Archives of the UK, London, England
http://www.pro.gov.uk/about/preservation/digital/conference

Association of Moving Image Archivists (AMIA): Joint Technical Symposium on Preserving the Audio-Visual Heritage – Transition and Access, June 24-26, 2004, Toronto, Canada
http://www.jts2004.org/english/index_en.htm

"National Science Foundation Library Futures Workshop", June 15-17, Cape Cod, Massachusetts http://www.sis.pitt.edu/%7Edlwkshop

International Symposium on Digital Libraries and Knowledge Communities in Networked Information Society, March 2-5, 2004, University of Tsukuba, Japan
http://www.kc.tsukuba.ac.jp/dlkc

Colin Webb, "Guidelines for the Preservation of Digital Heritage", United Nations, New York, 2003
http://portal.unesco.org/ci/ev.php?URL_ID=8967&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1078720447&PHPSESSID=b5fda79b0f42c23c699ac23fbccb3475